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<110> Patrick J. Dillon et al.

<120> Nucleotide Sequences of Escherichia coli Pathogenicity Islands

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 agttgcgtca ttaccggata aatgaacggg ggggacgcac cggaagcctg accgtcagtg 960
 gtgcactgct gtcctcacc tgcacgctgg tgagtaatga ggtgccgtta arcctccggc 1020
 cggaaaatca ctctgcggca gccggagcac ctctgatgct gaggctggca ggatgtgggg 1080
 acggtggtgc acttcagccc ggaaaacggg gcgttgcgat gacagtctcc gggtcactgg 1140

taaccggtcc cggaagcgga agtgctttac ttctgaccg taasctatcc ggctgtgaca 1200
tcttggtata cac 1213

<210> 8
<211> 451
<212> DNA
<213> Escherichia coli

<220>
<221> misc_feature
<222> (437)..(437)
<223> n equals a, t, g, or c

<220>
<221> misc_feature
<222> (449)..(449)
<223> n equals a, t, g, or c

<400> 8
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tttaccatc tccccatcgg tactgattcc gtcacataa aaccgaatgg atacaccttg 120
ggcgtcaaac tcttttatta actggatcat gtcagcagta tcgcgccccaa ggggttcaag 180
tttcttcacc aagatgacgt caccttcctc caccttcac ctcagcaagt ccagcccttt 240
ccgatcgctt gaactgcccg atgccttgct agtaaagatg cgatttgctt tcacgcctgc 300
gtctttgagt gcccgaacct gaatatcgag agattgctgg ctgggttgata cccgtgcgta 360
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aacaaaaaat cgatttnaat tagacaccnt t 451

<210> 9
<211> 720
<212> DNA
<213> Escherichia coli

<220>
<221> misc_feature
<222> (621)..(621)
<223> n equals a, t, g, or c

<400> 9
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tcccgttact ggcgtctccg ttatcgtatt ctgggtaagg agaagactct ggcacttggt 120
gtgtatccag aagtttctct ctccgaagct cgtacaaaac gggatgaggc ccgaaaactg 180
atttcggagg ggattgaccc ttgcgaacag aaaagagcta aaaaagtagt ccctgattta 240

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<210> 10
<211> 2920
<212> DNA
<213> Escherichia coli

<220>
<221> misc_feature
<222> (1)..(1)
<223> n equals a, t, g, or c

<220>
<221> misc_feature
<222> (3)..(3)
<223> n equals a, t, g, or c

<220>
<221> misc_feature
<222> (1250)..(1250)
<223> n equals a, t, g, or c
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<400>	10						
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tgcagattaa	catcagggga	aatgtttata	tccccccatg	caccattaat	aacgggcaga		180
atattgttgt	tgatttttggg	aatattaatc	ctgagcatgt	ggacaactca	cgtggtgaag		240
tcacaaaaac	cataagcata	tcctgtccgt	ataagagtgg	ctctctctgg	ataaaagtta		300
cgggaaatac	tatgggagga	ggtcagaata	atgtactggc	aacaaatata	actcattttg		360
gtatagcgct	gtatcagggg	aaaggaatgt	caacacctct	tacattaggt	aatggttcag		420
gaaatggtta	cagagttaca	gcaggtctgg	acacagcacg	ttcaacgttc	acctttactt		480
cagtgccctt	tcgtaatggc	agcgggatac	tgaatggcgg	ggatttccgg	accacggcca		540
gtatgagcat	gatttataac	tgagtcatac	ccaaatgaat	aactgtaatt	acggaagtga		600

tttctgatga aaaaatggck ccctgctttt ttatTTTTat ccctgtcagg ctgtaatgat 660
 gctctggctg caaaccagag tacaatgttt tactcgTTta atgataacat ttatcgTcst 720
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<210> 11
 <211> 1678
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (1666)..(1666)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (1677)..(1677)
 <223> n equals a, t, g, or c

<400> 11
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 gcataaaaat aagcatatgt aagcattttg gtttgctttt tttaacctgc caccgcaatg 180
 aatgcttttt ttatgttaat gtgcgttatg aaactaaatg caagaaacat atttaaagga 240
 ttaatatcgt tctctcacag actccgttta cttattcaag aatataattt aatttatagt 300
 gagcttatta tgaatatgaa caatccatta gaggktcttg ggcatgtatc ctggctckgg 360
 ggccagttcc ccattacaca gaaacyggcc agtttctttg tttgcaataa atgtattacc 420
 tgcaatacgg ggctaaccaa tatgctttat taaccggggg ataattaccc tgttgcatat 480
 tgtagttggg gctaatttaa gtttagaaaa tgaaattaaa taccctaag atgttacctc 540
 attagtcgca gaagactgga cttcagggtga tcgtaaakgg tycattgact ggattgctcc 600
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ccgagccatc aggggtggaty ccaaaactca tgttggtaaa gtatcagaat ttcacggagg 720
 taaaattgat aaacagtttag cgaataaaat ttttaacaa tatcaccacg agttaataac 780
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<210> 12
 <211> 2676
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (128)..(128)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (447)..(447)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (1100)..(1100)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature

<222> (2660)..(2660)
 <223> n equals a, t, g, or c

<400> 12
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 aataaganaa aacataagag tgaactaaaa aacatttctt atgaattcca atcaactaat 180
 ctcaatggca aagatactgc gtatatattg gatgtaraaa gaaatctaga aagtaaaatt 240
 gagaatactt caaacgaatg agtgtaatga aataagaaaa ctaaccgacc agattgcaat 300
 aattagtgat agtaccactt ctgaaaattt atcatcggtt caagtaactg aagcaatcga 360
 aactgaactt gaacatttac gagaccaaca agcaaataac gcagagttaa tactacttgg 420
 catggctctt tctgtagtac atcatgnatt taatggtaat attagggcaa ttagaagtgc 480
 gctaagggaa ttaaaagcat gggctgacag aaatcctaag cttgatatta tataccaaaa 540
 aatcagaact agttttgatc acttagatgg ttatttataaa acctttacac cattgacaag 600
 acgtttaagt cgctctmaaa ccaatataac tggaaactgcc attttagaat ttatcagaga 660
 tgtattcgat gatcgtcttg agaaagaagg aattgaatta ttcactacct caaagtttgt 720
 taatcaagaa attgtaactt acacatcaac catttacct gtctttataa atctaattga 780
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<210> 13
 <211> 1485
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (16)..(16)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (144)..(144)
 <223> n equals a, t, g, or c

<400> 13
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 tgtgcttgcc ggtgattata atgnactg sagccggtgc cggctgggac ctgggtgtgc 180

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cggggaccct ttccgctgat atcacgcagt cagtagcccc tattgagggg gagagaacgt 240
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<210> 14
 <211> 22671
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (19750)..(19750)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (20174)..(20174)
 <223> n equals a, t, g, or c

<400> 14
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 <211> 2385
 <212> DNA
 <213> Escherichia coli

<220>
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 <222> (131)..(131)
 <223> n equals a, t, g, or c

<220>
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 <222> (133)..(133)
 <223> n equals a, t, g, or c

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 <211> 746
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 <213> Escherichia coli
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 <221> misc_feature
 <222> (718)..(718)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (741)..(741)
 <223> n equals a, t, g, or c

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746

<210> 17

<211> 411

<212> DNA

<213> Escherichia coli

<400> 17

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<210> 18

<211> 977

<212> DNA

<213> Escherichia coli

<220>

<221> misc_feature

<222> (956)..(956)

<223> n equals a, t, g, or c

<400> 18

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<210> 19
 <211> 400
 <212> DNA
 <213> Escherichia coli

<400> 19
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<210> 20
 <211> 12368
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (6059)..(6059)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (10634)..(10634)
 <223> n equals a, t, g, or c

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<210> 23
 <211> 2677
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (2522)..(2522)
 <223> n equals a, t, g, or c

<400> 23
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 atgtccttcc tggtcactat gctgttcaac tccaaactct ctgacgatcc gatttatcgc 180

aagcgtctgg aagagggcct ggttgaactg cgcggtgaaa agcagattga aatcaaatcc 240
ggtgcaaaaa cgtccgtctg gctgttcctg ctgggcgtag ttggcgtggg tatctatgca 300
atcatcaaca gccaagcat gggctctgggt gaaaaaccac tgatgaacac caccaacgca 360
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gacaacattc tcaaytcag cacccttcaaa gcaggatga gcgcctgtat ttgtatcctg 480
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<210> 24
<211> 537
<212> DNA
<213> Escherichia coli

<220>
<221> misc_feature
<222> (521)..(521)
<223> n equals a, t, g, or c

<400> 24
atcctgatga cgccgtaaat gtgcatttgc caggattgcc gcatagaggg cacgaagaaa 60
aggtcggttg tcaggatgta tccagatgat tctgccactg aaaccttcag ggataagacg 120
attgccaact gccagtcctt taagggcagc attcagcgcc ttacgcgggg cattctgctc 180
cagaaatacg tatgccaaat gagcgtgtac atcaataaag tcattctcct gtcgggcaag 240
gcgcctgagt ttgttgatgt aacttgtttc gctgatttca tccgcatcgt atgcatcaat 300
cagttcttca aatcatcca gcaacgagcc aaaccagggt tccggaaata tgaaacagcc 360
ctggttatcg ttcacttcaa agcgtaatat gccagtcata ttctgaacct gtaaaaaagg 420
atagaccata atctgcaggc tataaaaatt gtggatgcct ggcatcgggt gtccttttat 480
tgtccgggat taacgttgcc catgataata cagtgaatcc ngttctgtgg taagacg 537

<210> 25
<211> 1128
<212> DNA
<213> Escherichia coli

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<220>
<221> misc_feature
<222> (1115)..(1115)
<223> n equals a, t, g, or c
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<210> 26

<211> 2311
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (3)..(3)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (2008)..(2008)
 <223> n equals a, t, g, or c

<400> 26
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 atacctgaat gctgttctgg acaatgtaat gtcagatgct atagcaccga gatgggtatt 180
 aaaggccagg ccagctaacc ccgctgtata tcctgaagct gtggtaagac cactgtttaa 240
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 tttattcgca taacgatact ttcccactga catttgccag cgactaaatc cgggacgaat 360
 gagttgagca acggccgcaa aaggaaccgt gaacattcgt gtctggccat tagactctgt 420
 tatcttaacg agaaggcac cagcatatcc actgggatat aaatcattga tgacaaatgg 480
 tccggctggc accgtcgttt catagaggat atgagcattt tgataaatgg ttacttttagc 540
 attactgtta gctattcccc ggacagcagg rgcatagcca cgtaaagaac cgggtaacat 600
 tcgttcatcc gatgctaacc tgactccccg caaactgagg ctatccatta gctcaccatt 660
 cgtataaaaa tcccctaattg tgaattgtgc tctcaatggg gcaaggatcat gcattatact 720
 tgtttctata ttctgatatc cggcaggata gctattattc cagctctcac tgccacgggtg 780
 gcgcaaagcc atccccacaa attgaatcca gcttttaatc ccagataagt ctgttcgtta 840
 ctggtcccg aagagctata ctggtaatag ttagcatcat agtttataaa tgctgcagga 900
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 aatactgcaa atcagccttc cccttcata cattattaac ataaatatca gaataatacc 1200
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 ccagaacatt tagatagaaa agagattctc ggtctttcgg tagtgactcg cctgtatata 1860
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 gcattacat cccaccaat agtttcagaa t 2311

<210> 27
 <211> 1118
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (142)..(142)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (228)..(228)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (261)..(261)
 <223> n equals a, t, g, or c

<220>

0925004-092004

<221> misc_feature
 <222> (693)..(693)
 <223> n equals a, t, g, or c

<400> 27
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 ttctctgcatt actgttataa agataaacga gtaacccatc agaagatgtg tttgatgtat 120
 tctgaactaa aatagcattg tnataagtgt ttgttgccgt tatcgtaacc ttcattgttc 180
 ccagattata gggacaccgc atattcacag taaactcttt ttcgtgantt ccattttgac 240
 tcaggggtctg aatctctaca ncctgccagt caacagttgt gttgcttaca gtacaggcag 300
 gaataatcag ttttcctctg aaggtcagat tatcaactgc atgtacatgc tgagacatta 360
 acactgcccc cagcattacc ggaagacaca aacctcttat ctttttcatc tgaaatatcc 420
 tgtacaaaaa ttttgtaac gatatgtcaa ttcaaactgt gctgttgctt cataatcacc 480
 gggtagcaca ctcttcgtcc gcagggcttc cggcgttgcc acaacatacg cgccgaaagg 540
 aagctcaaga ctgtttccgg taaccttttc cccctggcct ttgttatggg aggtgccggg 600
 tttcagcaga ctgctgccat cgggtgtccag cagtgcgaatg cctaaccggc cagcattcac 660
 tccgggttacc ttcagatggc ccgggagrcg cyntcttccg tccccttaaa ggtcagggtc 720
 acaattttgc caactgctgt tgcattggcag ttttccagcc tgatgacaaa cgactctgtc 780
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 acatctgagg ctattgcctg tccggcagac agtgccggcaa acagtaaaag agcgccctgtg 960
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 ctcttgccat cagaatactc aacctcctgt ggcggccttt tcctccaggc gggcaagcat 1080
 ctctcctctg cggcgggtaa ggcggggaca gtaaaaaa 1118

<210> 28
 <211> 562
 <212> DNA
 <213> Escherichia coli

<400> 28
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 gccakgatcg ggataaaacg tacaggcagc gataaacaga cagcccggat agcgggttgtt 120
 tttaacgcac tccgataacg cctgataacg tgccagcaac ttttgttcgg cggtttgcgt 180
 ttctgccagc atcagctgac gacgccagac atctatctgt tggctaagat aacgcagcgc 240
 atcgtagagg attgcctctt tgtctggcca gaagcggcgt actcgtccag tggataatcc 300

acacgttcag caaccatctc cagcgtgggtg ttggcaatcc cttgtaattc taataatttc 360
 agggcttctc ccagtacatc ttcacgttgc acgctatctt cctccgkctt tcccactgca 420
 atgttcgkctc acggttggcg atcgcgcaaa tgtgcgctgg aaggtttcag catccataaa 480
 gcccgtagcg cgtgcttgtg gatgctcctg gccttgggtcc ggtcaaaaaa gagaatttgt 540
 ccggtagggc caaggatatt aa 562

<210> 29
 <211> 745
 <212> DNA
 <213> Escherichia coli

<400> 29
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 cggtaagtac agataaccac aacataagct cattcagtaa attttatctc tgaacaaacg 120
 actatggcat gctcatttat actattcata agaaagtgtg attatctgta agcattaacc 180
 atcaaactcat ataaccatac taaactggcg gatcatcagc accattagca ggtaacttat 240
 tgaaatttta ttatgtgttt ttgttgata attaatatgc aatatgaatt tgctatttta 300
 gaatcatgaa caccatttaa aattaccatc attaacatca tataaaaata tatttttact 360
 aaaacatgaa ttgtatatat ttattagctc aggaaaatta tcagggttca ctttcaaatt 420
 aacctgaatg ttatgcttaa tttcaccag tagttcttca tgtgtagatt ttattatccc 480
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 tttttgcaaa gtataaaaaa ttgaattcgc cactttttta cttattgctc ttttatactg 660
 tgatcgagca agattcagta gcggaagtcc tcgttcaata aatgaatgtg aaaagactgg 720
 ataaattgat gtcggaacc tttca 745

<210> 30
 <211> 400
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (6)..(6)
 <223> n equals a, t, g, or c

<400> 30
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 attacgtaac gtatcgagga aatcgaggta gccctgatca acatctttgg tgacgtagac 120

gccgttgaac accgagcatt caaactgctg gatatccgga ttttcagcgc gaacggcgctc 180
 gatcagatcg ttcagatcct ggaaaatcaa cccgtcagca ccgatgatct ggcgaatttc 240
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 cgttcgggaa agcgaatttc cggtgccgca gaagcgagggt acactttctt cgctccggct 360
 tcgctgcca tctcgataat ctgtcagaag tggtgccacg 400

<210> 31
 <211> 824
 <212> DNA
 <213> Escherichia coli

<400> 31
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 ttgcctgtgc cagtcctgat gggcgcgagc ttttcagtaa agagcgaatg agttctgacg 660
 catgaattgt acccaacttc aggaaccagc ggttcgcata atctcatccc actgactctc 720
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 tttattcacc cgccagaaca ccgcctcacc tgcacgggca agcc 824

<210> 32
 <211> 911
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc feature
 <222> (841)..(841)
 <223> n equals a, t, g, or c

<400> 32
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cataaggatt tcaggatctg ccagactgcg cagaaatgat gcttacgaat acacagtaaa 120
 ggcaatgtca tttccgatac agagcctgac attgccataa tgagctatct atctgaaaaa 180
 cgacagaata tgatgtttta tcgtaacgta attttaagtt ctcaacttat tgagacatat 240
 tgtctttttt acccatgtgg tcattttttca tcccatccgt tttgctcatg tgttctttct 300
 ccattttctc tttatccatt gcattttttgc acataccatc cttgcacatt ttatcatgcg 360
 cgctggacat gctgcctttt acttcatgtg ttttatccat tgtgtctgct gcctgagcat 420
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<210> 33
 <211> 463
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (1)..(1)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (27)..(27)
 <223> n equals a, t, g, or c

<400> 33
 nggggcagga taattgtatc ctgcccngta tataattctc agcacagggtg ttgactaaag 60
 agcgtgaaac tttgctatta tgtcttcgta agattcacgg acggttatac ttgagcctga 120
 ttctgtgaag taaacaacag cagaagcatc gttgcctttt tcaatgtatg aaacattcca 180
 gtcattgata gccactgagg gctgaccatt atcccgacgg tgcgtcttaa tgaatcggg 240
 aagtaattct gcaatatcgt taaaaacacc atttacggta tgagtgatac caccaacgca 300

atgtagatga gttgactccg gggatatcatt gtctgcttct gcaaagagta tagctgtctt 360
gctaattgta acaggcgctt gtgarccgga taattcgaga gaaataaacc cggattctgc 420
cataaaaaact ccagtttgtg atgttatatc atttcatatg ttt 463

<210> 34
<211> 565
<212> DNA
<213> Escherichia coli

<400> 34
ttctaacctc tgacaaaaa cagaattacg gttgttatgc tgcagaacct aatgacgtgc 60
aactggcgcg ctatttttcat cttgatgaac gggatctggc cttcattaac caacgacggg 120
gcaaacataa taggctgggc attgcgcttc agctcaccac agcccgtttt ctgggaacat 180
ttctgacgga tttaactcag gttctgcctg gtgttcaaca ttttgtcgcg gtacagctta 240
atatccaccg tccagaagtt ctctcccgct atgctgaacg ggacactacc cttagagaac 300
atactgcatt aattaaggaa tattacggct atcatgaatt tggatgattt ccatggctctt 360
tccgcctgaa gcgtctgcta tatacccggg cgtggctcag taatgacgac cgggtctgat 420
gtttgatttt gccactgcat ggttgcttca aaataaggta ttactgcccg gagcaaccac 480
actagtacgt ctcatcagt aaattcgtga aagggcaaat cagcggctgt ggaaaaagct 540
ggccgcactg ccgaacaaat ggcag 565

<210> 35
<211> 512
<212> DNA
<213> Escherichia coli

<400> 35
cgatggcgctc cgggggtgaac gccggataag tttaatttat ccggtcaggc aaaaggcatt 60
aatctgcaga tagctgatgt caggggaaat attgcccggg caggaaaagt aatgcctgca 120
ataccattga cgggtaatga agaagcgctg gattacaccc tcagaattgt gagaaacgga 180
aaaaaacttg aagccggaat ttatttttgc gtgctgggat tccgggtcga ttatgagtga 240
gtcactccgg tgagatgtcc ggttatattt cttttttgtg aatctgggtga tgcgtggaat 300
gaaagacaga ataccttttg cagtcaacaa tattacctgt gtgatattgt tgtctctgtt 360
ttgtaacgca gccagtgccg ttgagtttaa tacagatgta cttgacgcag cggacaagaa 420
aaatattgac ttcacccgtt tttcagaagc cggctatgtt ctgccggggg caatatcttc 480
tgggatgtgg aattgttaac ggggccaaag ta 512

<210> 36

<211> 827
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (16)..(16)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (361)..(361)
 <223> n equals a, t, g, or c

<400> 36
 ttgccggtgc ggttantagt ggcagtgggtg tcttttggtg taaatgctgc tccaactatt 60
 ccacaggggc agggtaaagt aacttttaac ggaactggtg ttgatgctcc atgcagcatt 120
 tctcagaaat cagctgatca gtctattgat tttggacagc tttcaaaaag cttccttgag 180
 gcaggagggtg tatccaaacc aatggactta gatattgaat tggttaattg tgatattact 240
 gccttttaaag gtggtaaatgg cgccaaaaaa gggactgtta agctggcctt tactggcccg 300
 atagttaatg gacattctga tgagctagat acaaatgggtg gtacgggcac agctatcgta 360
 nttcaggggg caggtaaaaa cgttgtcttc gatggctccg aagtgatgct aataccctga 420
 aagatgggtga aaacgtgctg cattatactg ctgttggtta gaagtcgtca gccgttggtg 480
 ccgctgttac tgaaggtgcc ttctcagcag ttgcgaattt caacctgact tatcagtaat 540
 actgataatc cggtcggtaa acagcggaaa tattccgctg tttatttctc aggggtattta 600
 tcatgagact gcgattctct gttccaacttt tcttttttgg ctgtgtgttt gttcatgggtg 660
 tttttgccgg tccgtttcct ccgcccgga tgcccttcc tgaatactgg ggagaagagc 720
 acgtatgggtg ggacggcagg gctgcttttc atgggtgaggt tgtcagacct gcctgtactc 780
 tggcgatgga agacgcctgg cagattattg atatggggga atacccc 827

<210> 37
 <211> 400
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (238)..(238)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (364)..(364)

<223> n equals a, t, g, or c

<220>

<221> misc_feature

<222> (384)..(384)

<223> n equals a, t, g, or c

<220>

<221> misc_feature

<222> (398)..(398)

<223> n equals a, t, g, or c

<400> 37

ccagggggccc aaaatccgtg tatccacctt taaagaaggc aaagttttcc tcaatattgg 60

ggataaattc ctgctcgacg ccaacctggg taaaggtgaa ggcgacaaag aaaaagtcgg 120

tatcgactac aaaggcctgc ctgctgacgt cgtgcctggg gacatcctgc tgctggacga 180

tggtcgcgtc cagttaaaag tactggaagt tcagggcatg aaagtgttca ccgaagtnac 240

cgtcggtggg cccctctcca acaataaagg tatcaacaaa cttggcggcg gtttgtcggc 300

tgaagcgtg accgaaaaag acaaagcaga cattaagact gcggcggtga ttggcgtaga 360

ttanctgggt gtctccttcc cacnctgtgg cgaagatntg 400

<210> 38

<211> 578

<212> DNA

<213> Escherichia coli

<220>

<221> misc_feature

<222> (106)..(106)

<223> n equals a, t, g, or c

<220>

<221> misc_feature

<222> (501)..(501)

<223> n equals a, t, g, or c

<220>

<221> misc_feature

<222> (549)..(549)

<223> n equals a, t, g, or c

<220>

<221> misc_feature

<222> (556)..(556)

<223> n equals a, t, g, or c

T00250" T0033650


```
<210> 39
<211> 399
<212> DNA
<213> Escherichia coli

<220>
<221> misc_feature
<222> (380)..(380)
<223> n equals a, t, g, or c
```

```
<210> 40
<211> 327
<212> DNA
<213> Escherichia coli
```

```
<400> 40
cagcctccgt taccggacag caaggaggct gaatggagtt tacaggattt gcttttttat      60
aatgtctggc catgcagtma aaccggacag gttttattat catgtgaggt attctgacat      120
aaaatgctgg atttttatth tgtgacgaat gctgcaaaat tgcattctgca ctctgatgta      180
```

gcttttatct gtttcagtga agcatgccca caaactgagt tattaagttg tggaagaaca 240
 gttttgtccc gcttgcataat ctccctttcaa aaaccagtat gtcgccatgc ctgccttaa 300
 tggagagcgc tgaaccatac cttctttt 327

<210> 41
 <211> 314
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (72)..(72)
 <223> n equals a, t, g, or c

<400> 41
 ggagatgggc atggaaactca cttcataata atgcctaccg aagaaatatt aatagatgac 60
 atttcacga gngatagcaa taaaacatca gagcagtctt ctgccttaga aaaagcttta 120
 ttaggtttta caaacacaat gtacagtgat tcaaaccctc ctattatagc tcgtttttaga 180
 gactatctgg aagatggtga gtgcattgac agaattagcg aatcaatttt ttttacaccg 240
 caagaattca atcttgcaga tcaccacatt gaaggatggt tcaatgaatt tggatcaattc 300
 agtggaactg tttc 314

<210> 42
 <211> 590
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (44)..(44)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (58)..(58)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (142)..(142)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (145)..(145)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (491)..(492)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (584)..(584)
 <223> n equals a, t, g, or c

<400> 42
 tccaagatc tttttggcgc caaatccaca aaacccgtcg ttantgtcgc gcagccantt 60
 gcaggccgaa tttgcaccgt tttagaaagc ggcgttttgt agagcagcac gcagtgagaa 120
 gccaccgcgc cacgacctac gngcncgcgc agctggtgta attgcgccag acccagacgc 180
 tccgggtttt cgataatcat cagactggcg ttaggcacat caacgccgac ttcaataacg 240
 gttgtggcaa ccagcaggtg tagctcacct tgtttaaacg acgccatcac cgctgtttc 300
 tcggcaggtt tcatccgccc gtgtaccagg ccaacgttca actctggtag cgccagtttc 360
 aactcttccc aggtagtcc gmcgcctgcg cttccagcaa ttccgactct tcaatcaacg 420
 taaaaccca gtatgcctga cgaccttcag ttatgcaggc gtggtgcacc gggtgcaatg 480
 gatgtcggta nngcgggtat caggaatagc gaccgtagtc actgggcgtg cggcctgggc 540
 ggcactccat ctatcaccga gggatatcgag atcgggcata cgcntgcatt 590

<210> 43
 <211> 400
 <212> DNA
 <213> Escherichia coli

<400> 43
 gacgaaaggg cctcgtgata cgcctathtt tatagggttaa tgtcatgata ataatggttt 60
 cttagacgtc aggtggcact tttcggggaa atgtgcgcgc aacccctatt tgtttathtt 120
 tctaaatata ttcaaatatg tatccgctca tgagacaata accctggata aatgcttcaa 180
 taatattgaa aaaggaagag tatgagtatt caacatttcc gtgtcgccct tattcccttt 240
 tttgcgcat tttgccttgc ctgtttttgc tcaccagaa acgctggtga aagtaaaaga 300
 tgctgaagat cagttgggtg cacgagtggg ttacatcgaa ctgggatctg caacagcggt 360
 aagatccttg agagtttttc gcccgaagg aacgtttttc 400

<210> 44
 <211> 400
 <212> DNA

<213> Escherichia coli

<220>

<221> misc_feature

<222> (20)..(20)

<223> n equals a, t, g, or c

<400> 44

```
attcggaaaag atgcttctan tttttttaag cacgtataaa ctgttaattc aggttcaatg      60
ctacgaaatg cactagttat aacctgtatt gaaggaaaga tcttctgata ctctttccag      120
agatcttcaa gtctggccat ggaaattgac ttggctgcat attctaggtc agtgtttatg      180
atagtttctc tattctctct gaatgcggaa aaaaaagctt cattcaacaa tgatagtaaa      240
tccctggggc ggtaaagggt aaattgcaaa catcgcttaa aaccattcct ccctttaaga      300
tcatccgctg tgcattctat ccaaactcgt tgatctttct caatatctag cttaaagtct      360
actttcattc ttttagctga cagcattagg agttgtgccc      400
```

<210> 45

<211> 585

<212> DNA

<213> Escherichia coli

<220>

<221> misc_feature

<222> (25)..(25)

<223> n equals a, t, g, or c

<220>

<221> misc_feature

<222> (178)..(178)

<223> n equals a, t, g, or c

<400> 45

```
taatgttgaa gacagagata taatntacag catcatccca caaggcagat ataacaatac      60
ttgactggga tatgcaaagc gatagtgggc aatttgctat tgaaataata aaatcgataa      120
tcgtttcaga tataaattct ggaggacgtt tacgtcttct ttctatttat actggtgnac      180
atgttactgc tgttataact aagttgaaca atgagttaaa gaaaacatac cgtagcgtaa      240
taaaaaatga tgatagtatt tttattgaag ataactatgc actcgaacaa tgggtgtatag      300
ttgttattag taaagacgtt tatgaaaaag atcttccaaa tgtgttaata aaaaaattca      360
ctaaccttac agctggggtg ctatccaacg ccgcactctc ttgcatttct gaaataagag      420
awaaaacca tgggatatta acaaaatata ataataaatt agacactgca tatgtttccc      480
acatcttaaa ttttaataaaa tccaaggrgt caagggcata tgcttatgaa aatgctcatg      540
```

585

```
<220>
<221> misc_feature
<222> (198)..(198)
<223> n equals a, t, g, or c
```

<220>

<221> misc_feature
 <222> (468)..(468)
 <223> n equals a, t, g, or c

<400> 47
 ggatgccagt gtcagcgact ggtaaagtg gtcgatatcg atgagcaaatt ttacgcgcgc 60
 ctgcgcaata acagtcggga aaaattagtc ggtgtaagaa agacgccgcg tttcctgcc 120
 gttccgctca cggaacttaa ccgcgagcag aagtggcaga tgatgttgtc aaagagtatg 180
 cgtcgttaat tttatctcgt tgataccggg cgtcctgctt gccagatgcg atgttgtagc 240
 atcttatcca gcaaccaggt cgcacccggc aagatcacccg tttaggcgtc acatccgtcg 300
 tcccctggca aacggggggcg attttcctcc atttgccctca gtggctggcg tttcatgtaa 360
 cgatacatga cagcgcgccga caagatcctg atactctttg ggtattcaac cgtttccagt 420
 gtaattcgtc gttcacnaac attggcggtta caggcggggc tggcngtnac cca 473

<210> 48
 <211> 482
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (48)..(48)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (87)..(87)
 <223> n equals a, t, g, or c

<400> 48
 gaagtgcagg atggctgtgg tttctccatc ggtcaccagc agcagttngc atcatggatt 60
 gcctataaag tcgcgccgtt cctcggnaaa aaagaggaga gcgttgaaga cctcaaattg 120
 ccgggctggc tgaacatttt ccacgacaac atcgtctcca cgcgattgtg atgaccatct 180
 tctttggtgc cattctgctc tcttcggtat cgacaccgtg cagcgatggc aggcaaagtg 240
 cactggacgg tgtacatcct gcaaaactggt tctcctttgc ggtggcgatc ttcacatca 300
 cgcagggtgt gcgcagtgtt gtggcggaac tctctgaagc atttaacggc atttcccagc 360
 gcctgatccc aggtgcgggt ctggcgattg actgtgcagc tatctatagt tcgcgccgaa 420
 cgccgtggtc tggggcttta tgtggggcac catcggtcag ctgattgcgg ttggcatcct 480
 ag 482

0955004.092004

<210> 49
 <211> 185
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (168)..(168)
 <223> n equals a, t, g, or c

<400> 49
 gacgacctgc aggcattgcaa gcttggcact ggccgtcgtt ttacaacgtc gtgactggga 60
 aaaccctggc gttacccaac ttaatcgsct tgcagcacat ccccttttcg ccagctggcg 120
 taatagcgaa gaggcccgca ccgatcgccc ttcccaacag ttgcgcantc gaatggcgaa 180
 tggcg 185

<210> 50
 <211> 491
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (472)..(472)
 <223> n equals a, t, g, or c

<400> 50
 taacgtttca atacgcgcga ccagctggcg gcgctcatatc ggcgttaattt tggcgtcggc 60
 gagcaaaatc ccttgtttta aggtatttttg ccagctgccg tcgtcatatt ggcgagcttg 120
 ctgacgcgac tgcgcaggca ttaaactgatc agcacaatcc atcgcccgca gccagtaaag 180
 cggattgggtt tcggttgatt taccttgcag cgcccagatg tcgtacatt cagtagaaag 240
 atagtcagcc agttgataaa ccggaatttt ttcttctgct ggcgtatcaa tggctggctt 300
 attgtgattc tgcacgcaac ccagcaatgc cagacatgga gaccctgccca gccacagccg 360
 tcggggcaat aatcgttgaa aaatgtgtcg catattcacc agacttaaag cctatcccag 420
 tgggcgtaat tggtgcagac agtctggaca tggacagcgc ggagaaaccg gnagcgtaca 480
 tatcgtacgt g 491

<210> 51
 <211> 106
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (105)..(105)

<223> n equals a, t, g, or c

<400> 51
acttgaacgg caattattat ttatccatgc aacttcaagt tgcagtatcg gaacattaac 60
ttttctgggg tgaatatcac tctgatatcg ttttttgtat gcgtnt 106

<210> 52
<211> 481
<212> DNA
<213> Escherichia coli

<220>
<221> misc_feature
<222> (439)..(439)
<223> n equals a, t, g, or c

<400> 52
tttatgtgcg gtattgatgg ctgaagcctg taatatcgga ctggaaccgc tgataaagca 60
caatatacca gactgaccc gccatcggct cagttgggtg aaacagaatt accttcgtgc 120
agaaacgctg gtcagcgcca atgcccgcct gggtgatttt cagtccacac tggagcttgc 180
tggtcgttgg ggaggtggag aagtggcatc agctgacggc atgcgctttg tcacaccagt 240
gaagaccatc aactcaggat ctaacagaaa atattttggg tctgggacga ggcacacct 300
ggtataactt cgtatctgga tcagtactct gggttccatg gcattgtggg acccggtaca 360
ttacgggrct cgatttttga ctggaaggac ttcttgagca gcagacaggg ctgaatccag 420
ttgaaatcat gacagacant gcgggtagca gcgatattat tttcgggtctg ttctggctac 480
t 481

<210> 53
<211> 558
<212> DNA
<213> Escherichia coli

<220>
<221> misc_feature
<222> (4)..(4)
<223> n equals a, t, g, or c

<220>
<221> misc_feature
<222> (36)..(36)
<223> n equals a, t, g, or c

<220>
<221> misc_feature
<222> (69)..(69)

095604.09204


```
<220>
<221>  misc_feature
<222>  (456)..(456)
<223>  n equals a, t, g, or c
```

<400>	53						
tggnccgtaa	ttcccaacca	tttgccgagg	tccagntttt	tcaccatggt	actcgggata		60
gccaaaacng	ataccgatgt	tgccgccgtc	cgggtgcgag	gatcgcggtg	ttgataaccga		120
tcagttcgcc	gttcagggtta	accagcgcac	caccggaggt	accacggttg	atcgctgcat		180
cggctctggat	gaagttttcg	tagttttcgg	cattcaggcc	gtacgccccca	gcgcagagac		240
aatcccgaa	gttaccgtct	cgcccagacc	aaacgggtta	ccaatcgcta	cggtgtaatc		300
accacgcgc	agtgcacag	aatccgccat	cttaattgcg	gtcagggtttt	tcgggttctg		360
gatttgatc	agcgcgatat	cagagcgcgg	atctttgccca	accatcttcg	cgtcgaactt		420
acggccatcg	ctcagttgaa	ctttaatgac	cgtcgngtta	tnaacaacgt	ggttgttggt		480
gacgacatag	cctttatcgg	catcaatgat	gacgccggaa	cccagcgcca	tgaattctgt		540
tqctqccqc	caccatta						558

```
<220>
<221> misc_feature
<222> (37)..(37)
<223> n equals a, t, g, or c
```

```
<400> 54
cacctgctg acgtgaccga ccttttctcc tcgctgnttg tttccctat cgtcggcctg 60
gtcattgcgg gaggcctgat attcctgctg cgacgctact ggcgcgggac gaaaaaagcg 120
tgaccgtatt cgccgcattc cggaagatcg caaaaagaaa aaacggcaaa cgtcaaccgn 180
```

```
<210> 55
<211> 683
<212> DNA
<213> Escherichia coli
```

```
<220>
<221>  misc_feature
<222>  (600)..(600)
<223>  n equals a, t, g, or c
```

```
<210> 56
<211> 282
<212> DNA
<213> Escherichia coli
```

```
<220>
<221> misc_feature
<222> (231)..(231)
<223> n equals a, t, g, or c
```

<400> 56
 tggatgcagg gaaaaacatt gatattaccg gggcaacgtg ctcgccgggt ggagaccttg 60
 gaatgtctgc gggtaatracc atcaacattg ccgtaaacct gataagcggg acaaaagtca 120
 gtccggtttc tggcacactg atgacaacag ttcacatcc accacctcac agggcagcag 180
 catcagcgcc ggcgataacc tgggcgatgg ctgcaggcag agatkctggg ntgtcacagc 240
 atcctctgtt tctgccgggc acagcgccct gctttctgca gt 282

<210> 57
 <211> 697
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (36)..(36)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (696)..(696)
 <223> n equals a, t, g, or c

<400> 57
 atgaacggcc cccccacag cccgttaaca aacggntgcc ccggcgataa tcgtactgat 60
 aagttaactc cagcaggcgg ttaattgaaa gcgaacggga ggctgatgca tggtaataat 120
 cccttaaaac gcgacggcaa cgcgccagta aaccgtgaga tggtcagggg caagccagtc 180
 cgggtaaacc agaggcagtc cggcagtgaa cgaaccggaa acatgaccac tggtggtgct 240
 gagcccggca gcagcaccac acagcgtgcc ggacgagtac gggcatctc tgtcagagtg 300
 cagccagccg ccgtccagtg cagtactgac acggactgac ccacatatg gcaggagaga 360
 cagagaccag gacagctcat ttcgcagata accgccgtta ttaccggaga tatactgctc 420
 cttaaagcca cgcactgaac tctaccccc gaggtcagtc tgttcacac catgaagacg 480
 gtccggtgac cactgggcat aagcgtggt cagccaccac accctgtccg tgacggggcg 540
 ctgaaaactg gcactcaccg accatttccg gaactgattt acgggcaggt cccccctttt 600
 cccgtggtcg ctttctgcgc cgaaccaggg catccccgt gtgaataccg gattcagtg 660
 tccgacacca cccagaaact tgtgtgtgtg attcanc 697

<210> 58
 <211> 4835
 <212> DNA
 <213> Escherichia coli

09956004.092001

<400> 58
 ttcgactgag caccacaaat actgggtatc tccccagata gttcattgcg gtacaagcaa 60
 tataggtgca gaaagtcaac ctgctgcacc ctattggata attatatatg gccttcaata 120
 aagtttgcgg ttgtcgacgt tggctatatc agccatttcc aatgcatagt tctttggttt 180
 agcaccatca agttatagat ttgggaatag tttcaactgg tattgattga attggggttc 240
 atcgtcgatg attaatacta tttgtaaaga ctttattggt gatttcttat tataccacaa 300
 acccaaactg gtctaggtca tcatttgggt ttgataacgg gctctgataa tttctgctct 360
 tctgctatac tggggattat gaagaatatt aaggctgagt gtattgaggt agtgttcttt 420
 gaaccgacca ttcattgacaa tatattcttc aattcgtgag tgatccagca actgggtgaa 480
 tttaaaacac tgagtgatgt taccctctgt aatcgtatgg ttgctgaact agttgatgta 540
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<210> 59
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 <212> DNA
 <213> Escherichia coli

<220>
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<220>
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 <223> n equals a, t, g, or c

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 <223> n equals a, t, g, or c

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 <212> DNA
 <213> Escherichia coli
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 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (636)..(636)
 <223> n equals a, t, g, or c

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100260-1003550

<210> 61
 <211> 2556
 <212> DNA
 <213> Escherichia coli

<400> 61
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<210> 62
<211> 790
<212> DNA
<213> Escherichia coli

<220>
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<222> (19)..(19)
<223> n equals a, t, g, or c

<220>
<221> misc_feature
<222> (29)..(29)
<223> n equals a, t, g, or c

<220>
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<222> (57)..(57)
<223> n equals a, t, g, or c

<220>
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<222> (765)..(765)
<223> n equals a, t, g, or c
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<210> 63
 <211> 10906
 <212> DNA
 <213> Escherichia coli

<220>
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 <222> (856)..(856)
 <223> n equals a, t, g, or c

<220>
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 <222> (4922)..(4922)
 <223> n equals a, t, g, or c

<220>
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<220>
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 <223> n equals a, t, g, or c

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<220>
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<222> (10849)..(10849)
<223> n equals a, t, g, or c
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<213> Escherichia coli

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<223> n equals a, t, g, or c

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<210> 72
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 <213> Escherichia coli

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 <223> n equals a, t, g, or c

<220>
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<220>
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 <223> n equals a, t, g, or c

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<223>      n equals a, t, g, or c

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824

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<210> 78
 <211> 382
 <212> DNA
 <213> Escherichia coli

<400> 78
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 <213> Escherichia coli

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 <223> n equals a, t, g, or c

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 <213> Escherichia coli

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 <223> n equals a, t, g, or c

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 <211> 6313
 <212> DNA
 <213> Escherichia coli

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<210> 86
<211> 551
<212> DNA
<213> Escherichia coli

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<400> 86
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agcgsagggg gtaaaaagtg ataaatccca ccagtacgcc ggtaactgcg tcttgtagcg 180
ttaacggact ctgttgcgcc catgctgcaa tcagcccggg ccacaatacg ccctgagtaa 240
aaacatcggg cagccattgg ttgtcgaggt caatgacgct cgcggcaatc agccaggcgg 300
ataatatcat caccgccagc ccccatccac tttctggcca caccagactc gccagcaaaa 360
aagtgagtgc tgtcaataac tcaaccagcg gataacgttg ctgattttcg cctgacagtc 420
gcggcagccc tttgagcatc aaccatgaga gcagcggaat attgtcacga acgcggatgg 480
tctgctggca atgcgggaca gttgcgaacc ggggttagcca agggctttat tttttggact 540
gcggcactcg g 551

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<210> 87
 <211> 595
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (342)..(342)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (590)..(590)
 <223> n equals a, t, g, or c

<400> 87
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 ataatttggt ggatactaata agtaattacc ttgttattga aaatataatt attgttattt 120
 ttagcctcat taattaaatt gaaaaatcct ctctaatttt tgtcagatta gggctgtaga 180
 aaggatcgag ttcaagatgt ttacccatt tgcttttcat aaagtccact tccctggcaa 240
 atctggctag tttctccggt gaatcttcgg ctctcgcact aatcgattca tagtggtaaa 300
 gctcggcata aggtgtccag agattacgat accccgcttc gngtactttc agacagaagt 360
 ccacatcatt aaaagcaaca tgcagattct cttcatccaa cccggcaact tcctcataaa 420
 tatctttgcg aataagcagg caagccgccc tgacggccga gagagtttgt gtcaacaaca 480
 aacggctgaa atagcccga tggtggcgag gataatgttt atgggagtgt ccagctacac 540
 caccaatacc gagaatcact ccgcatggt gtaaaagtat cattactgtg atagg 595

<210> 88
 <211> 399
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (76)..(76)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (115)..(115)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (379)..(379)
 <223> n equals a, t, g, or c

095604.0904


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<210>      89
<211>      1013
<212>      DNA
<213>      Escherichia coli

<220>
<221>      misc_feature
<222>      (943)..(943)
<223>      n equals a, t, g, or c

<220>
<221>      misc_feature
<222>      (974)..(974)
<223>      n equals a, t, g, or c

<220>
<221>      misc_feature
<222>      (1013)..(1013)
<223>      n equals a, t, g, or c
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<400>	89									
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tgctattagt	tgagtcagtt	catcacattg	tttagaagcc	gcagccaaag	caagagtttg					120
ctcatctatg	ctttgctgca	atgtttgttg	cacaagttgc	ccttcttcca	gctgttgctg					180
tagatttgca	cttacctttt	tcagtgcatc	atattccaag	cctaacgtat	cgtgctgtgc					240
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aatttgccgc	gaatgttcgc	tcaatgctct	gttgctcttg	ctgagcgcgga	gagtaagggtg					480
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 ttgggcctca ttgagctggt cttgcaataa tgccacctca gatgtcagcg aattgatatg 720
 ttgctgggca aaagatagct catcagattg cacttgagca tgtgcaagct gcttttccat 780
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 acgttttaac tgggaattct cccaactctc gctacaagat ttncccaaac gacaaaagat 960
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<210> 90
 <211> 689
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (643)..(643)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (650)..(650)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (658)..(658)
 <223> n equals a, t, g, or c

<400> 90
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 gtgatggcgc ggctggacat tgccgaaaag cgcgtgccgc agsatggacg tattgcgctg 180
 ttgctgggcg gccgggcgat tgacgtgcgt gtatcaacca tgccttccgc ctgggggggaa 240
 cgggtggtgc tgcgactgct ggacaaaaac caggctcgcc tgacgctgga gcgtctgggt 300
 ttaagtctcg aactgactgc gcagttgcgc cactgttaca caaaccgcac ggcatttttc 360
 tgggtgacggg gccgaccggt tccggcaaaa gcaccacgct gtacgctgga ttgcaggagc 420
 tgaacaacca ctgcgtaac attctcacgg ttgaagacct tatcgaatac atgattgaag 480
 ggatcggtca gacgcagggt aacacccgcg tcggcatgac attcgcccgt ggctgcgcg 540
 caattttgcg tcaggaccgc gatgtggtga tggctsgtga aatccgcgat accgaaaccg 600

cagaaatcgc tgttcagget tcaactggac cggacacctg ggnactttcn acgctggnat 660
 accaaaaaaa aggggtgggg ggattatac 689

<210> 91
 <211> 1281
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (46)..(46)
 <223> n equals a, t, g, or c

<400> 91
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 cagccccgt tgcagctcct gcaaaacaga gagcgacaac ggatgcacat ggaggatctc 180
 cagcgacgct tcgcaccatg ccaccaggct aaaccgacgg ctgaaactat agggcagacg 240
 cacggtgtta gcggtggttt cctgtgctac aggcaccatt aacgcgttct cccggcatta 300
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 tgtgcggcat caggcttaag ccctgctcat cgcggtagat ttgctcggcg cgcagttagt 420
 tatatttgcg ctgcgacaca ccgtctgccg ccataccgtc acgcagaatg gtcggggcga 480
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 tctgcgtacc gttagcaaac tgcattaatc cggcatcttt cgacgcccac tgcacgccga 1200
 aattgataat tcaccttcgg caacttcac gatcaacgcc tcgacatgta cctgagcacg 1260

gcgaatatcc agttgttcaa t

1281

<210> 92
 <211> 421
 <212> DNA
 <213> Escherichia coli

<400> 92
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 agagcagcct tcccgtata ttgactcacg gcgtcactcg ttcgtgccgg aataaaatgg 180
 tacgaaaatc gtgtcggtaa acattatctt ttaacccaat aatcatttaa atcgcagcca 240
 gaaagttatt cgcttttaac tgaattatat ttataacgga gaacattatg gtttggctgg 300
 aaattatcgt agtacttggg gcaatakttt ttggtattcg ccagggggga atcggatttg 360
 gtttatgtgg cgggcttggg cttgccattc tgactctggg acttgggtctg cctatggggg 420
 g 421

<210> 93
 <211> 1018
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (781)..(781)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (990)..(990)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (993)..(993)
 <223> n equals a, t, g, or c

<400> 93
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 gtgacaccag ctaactcacc tatcagcgta tcccmattgt gctgggtaat gaggactgat 240
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F00260"4003550

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 aaccagagat gtcgttgcag cagcactaat acctgaagat actgaagcca gaacagtgtc 540
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 agcaattaa cgggcagcag cagcagatgt agataacccc tgtgctgcac gctgtgcgag 780
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 ctgctgcagc tttagtccg gtatctgcat ctgcattgct cagaatgaaa cttgctgaaa 900
 tcgcagataa aatacccgat acagtatcta accctgcacc gatattatca aggttaggta 960
 aattctgtaa cttattacca acaccgttcn ggnctgttgg tattgggata atacactt 1018

<210> 94
 <211> 400
 <212> DNA
 <213> Escherichia coli

<400> 94
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 accagggtaa taatcagata gaacaccgcc acggcgctcc agatctcaag ggcgcggaag 180
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 agcgaggtgt ctttaatgct gatgatccac tggttacca gcggcggcag catacgacgc 300
 gtgccagcgg taaaatgacg tagcgaatgg tttcccmacg tgaaagaccg agcgccagtc 360
 ctgcttcacg aaaacctttg tggatagaca gcaccgcacc 400

<210> 95
 <211> 1857
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (16)..(16)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (1465)..(1465)

<223> n equals a, t, g, or c

<400> 95

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cacgcaccta	atgcttcagc	ttctttggca	ataaccgcca	cactagttgc	attgagtaac	180
tcggc aaatt	cccgtcact	ctccgctttg	tcgactgcag	tatgggccgc	tgcgttaaca	240
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gtccggggcg	atccgccaca	taagtaattt	gacgcgata	agagccagct	ttcggtagca	660
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aacatataaa taaagaaaat tttaaatacat ataaccaaata tacttttcatt tattatcaat 1740
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<210> 96
<211> 1128
<212> DNA
<213> Escherichia coli

<400> 96
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gagactctga aaatatggac atatataacc tcttttatta tgaaatattt tcaataataa 180
taatccgta gtaatcctat catagggtaa tgtctcatca tgttaaaatg atcacattta 240
taatcatgtc aaaaagaaca acagaaaaaa tcatataaaa tcaattaaat ataattgcc 300
catattgttg ttattwaaac attggtggtg aatttaaagc gagaacagtt tgtaacagtg 360
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aatagtaagc gcaccgtgaa kgacgtgggg taaaaattag ttacagatt gagtgacatt 480
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<210> 97
<211> 439
<212> DNA
<213> Escherichia coli

<220>
<221> misc_feature
<222> (401)..(401)

<223> n equals a, t, g, or c

<400> 97

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cgtgtaaaaat ctttatacgg caagtagacg gaaaacgggc gctttccctg tcgccaatca    180
caccgacatg actgactttt gcgagaggaa gtgcataatt caccaattca gagcctaatt    240
cattgcgctg ggtaagctca aatcggaatg ggtttcgaac ctttcccgca acattgatca    300
ttggaccttg ttgctcaact gaaaatcaca tcttgatctt ttaatgccag cttcgggagt    360
ttcccatacc gtatgaaatc ataaagatca atttgckgtg nttactgcta ttttgtgcgt    420
gaacacctta atttttgcg                                         439

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<210> 98

<211> 906

<212> DNA

<213> Escherichia coli

<400> 98

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tattattgat atctgtcaga gtatcaataa tagaaggtaa ttgttttaca tactatcaac    180
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gcgaagtgtt gtatgtaaag agaataacaa gtgggtatcaa gtacctcagt tggaacaaac    540
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aaaatttcgc aacttagcac tcttctcttt cttatttctg catcagcatt cgccgcaata    660
gagcaaaatc aatctaattg ttcacattta gattatgatc ttgctgcctc gacaggagag    720
tctcgaaaaa tgctagcaga catcactgga cagcctaata caacctccac aacaggaagc    780
ttcacacaac agaatcgtaa tgggatgttg cttccaggag agtcagatgt acgaaaatta    840
ctgccgcaat ctgaagcagg cttacctcct ccgtatggtg ctaatttatt tgccggaggc    900
tatgaa                                                         906

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09936004-092004

<210> 99
 <211> 1395
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (1121)..(1121)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (1264)..(1264)
 <223> n equals a, t, g, or c

<400> 99
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 gtttaagtct gggcgtata gcaacacttt atctacaggc attgttttaa tgataaccac 120
 gtcattatca aagtgcatt ttaactctta ttaataacct tagagattat ttaccatgctc 180
 gataaaacaa atgccaggga gggatattaat atcgctattg ttgagcggtta caggattatt 240
 aagtggctgt gccagccata atgaaaatgc cagtttactg gcgaaaaaac aggcgcaaaa 300
 tatcagccaa aacctgccga ttaaactctgc gggatatacc ttagtgctgg cgcaaagtag 360
 tggcagcagc gtaaaaatga ccattatcag cgaatcgggt actcagacca cgcagacacc 420
 tgacgccttt ttaaccagct atcaacgaca aatgtgcgct gacccaacgg tgaaattaat 480
 gatcaccgag ggaattaatt acagcataac gattaatgat acacgtacag gtaaccagta 540
 tcagcggaaa ctggatcgta ccacctgtgg aatagtcaaa gcataacgctc gggtagatat 600
 aaattggcgc ggggtgtttt tcgtgacgca cgaatttatc tcattcaatg gctgacaaaa 660
 attcgtcaca ctcttaacca gagacaatct cttaatacag acaaagagca tctgcgcaaa 720
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 ctctggcgct atttctcctt ttctgcggaa tatacggcgg tttccccatc ggcgaataaa 840
 ccgctccgtg cgratgcaaa agcgttcgat aaaaatgacg tgcaattaat cagccagcaa 900
 aactggtttg gcaaatatca gcccgtcgcc acgcccggtaa aacaaccga acctgcacct 960
 gtggccgaaa cgcgtcttrr tgtggtgttg cgtgggatcg cttttggtgc cagaccggcg 1020
 gcggttattg aagaagggtg taaacagcag gtctatttgc aggggtgaacg cttggctcgc 1080
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 tgtcagtgc gaagcaaagc aagctgttgc tgaacctgct gtcagtgcgc cagttgagat 1260

ccnngctgcc gtgcgtcagg cactggcgaa agatccgcag aaaattttta actatatcca 1320
 gcttacgcct gtgcgtaagg aagggattgt cggttatgca gtgaaaccgg gggcagatcg 1380
 ttctctgttc gatgc 1395

<210> 100
 <211> 380
 <212> DNA
 <213> Escherichia coli

<400> 100
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 aaggacggat accggactct ttcgccactt cagcaatcac cggcagcgtg gaaaaaacia 180
 taaaccagat accggccata atgggtcatag accaggtgat aatcggcgcg attatgttga 240
 tatatttcgg gttacgccgc ataaaattac cagcgacggg accagataat ccattcccct 300
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 ggcggcgacc ccataggcag 380

<210> 101
 <211> 995
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (22)..(22)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (35)..(35)
 <223> n equals a, t, g, or c

<400> 101
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 cgaagatatt tgcgttatgc tgtaatatata taattcaatg tatttcagga acagtaatat 180
 actacagttt ctactttctt gtattttaata aattgttccg catcgctaaa agcaggtctt 240
 tcagaagcca caagaattct gtgggtccag tatttttagt taccctattt ttatatctaa 300
 cttgtaatac ttacagcatt ttcatcctc ctaatggaag gctgtaataa tctttgagct 360
 tagaaacatc aaaattatgc atctcattaa ttttgtcagt cacacgacct ctggtaaaaa 420

taaaaccccc agaaatatgc catttctagg gggggcgtaa gaatcaatat atttttagtgt 480
 tgttacattt agctcttagc tcttagctct tagctcttag ctcttagctc ttagcgtttg 540
 tagtttcatc gcaatgagta aaaggacaac aagaataagt gataacgta agagaagagc 600
 atagaaacca ttccagtggg atatttctat tatttttagac aatggatagc cagccgcgga 660
 cgcaccaaga tatgcgaata aactaacaaa accagtagaa gcaccagatg catatttatg 720
 tgagttttca gcagctgcca ttgcgatcag aaattgtggc ccaaagataa agaagccagt 780
 gatgaaaaat aataacgaaa aaacatattt actatcaata gaaaccaacc atagacatgc 840
 agaagcaatg attataccaa ttgtataaat aacattcatt tgagagcgat tgcccttaaa 900
 cagaatatct gatccccatc cagctacgat agcaccaaaa aagcctcaa cctcaaocat 960
 cattactggt gcatttgctg ttagcaagtc atatt 995

<210> 102
 <211> 817
 <212> DNA
 <213> Escherichia coli

<400> 102
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 ccgttataac tgaactgatg agagtctcct ccctgataat tacgggaaac cgtcccgttg 180
 aggttataat ccagcatcag tccgggaatg ccgtcgtccc agcgtgaggg aggcagccag 240
 gtggcatcag aatactcaag ccaggcctgc ggcatattga tgcgtaatac gcccgctccg 300
 gtatcaggac gaatatccac tcccggcaac ccatgaaaat ccgcacactg accatcatgc 360
 cagtaaaca ctttatccag agattctgct gttaaccca tcagtctgac catatctgat 420
 gtcagacagc tgcggcaatt ttttttctgc cttatctcct gacaacgcag gttcaacaaa 480
 tgamatctgt aacgatgcgg gagaaatact ttgcccgta acaatcacat ccagaagata 540
 ttgccccggc agaacatagc cggcttctga aaaacgggtg aagtcaatat ttttcttgct 600
 cgctgcgtca agtacatctg tattaactc aacggcactg gctgcgttac aaaacagaga 660
 caacaatatc acacaggtaa tattgttgac tgcaaaaggt attctgtctt tcattccacg 720
 catcaccaga ttcacaaaaa agataaataa ccggacatct caccggagtg actcactcat 780
 aatcgacccg gaatcccagc acagcaaaaat aatttcc 817

<210> 103
 <211> 709
 <212> DNA
 <213> Escherichia coli

<400> 103
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 tgtgggggact gtcgggggatg tttgaacggg taaaaataag tcatgagttt tttcattatg 120
 tcctgaaaaa cgggtgtgca atgccacttc tccgtgctgt ggcagacact gttgcctgtc 180
 acaacagagg cgtgatactc gaagggtgtg aaaatgaagc gttgttccgt attgccagag 240
 acatgaatgt ccagggtctgt cagggatggc tctacaggcg tgtggggggt gatgaattat 300
 ccgcgcttat tcagcagtat gaataatcct ttttcacaga ctggtcagct gtcaacattt 360
 atgttttttt atctgcggga atttatccgt ctgcctgtcg ggactactct gtcatacaga 420
 aatcaggcca gaataaattg ttgtggaaag gtgagattta ccggatgact gatgtgctct 480
 tgtgcacagg tatacaggca gtgtgtttcc agtatatgga aaatgattaa atgaataaca 540
 cagacttatt agaaaaaatc atcaggcatc aacaaaacaa agatcctgca tatcctttcc 600
 ggaacatct tttgatgcaa ctctgtatcc gtgtaacaa aaaaatacag aacagtacat 660
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<210> 104
 <211> 485
 <212> DNA
 <213> Escherichia coli
 <220>
 <221> misc_feature
 <222> (477)..(477)
 <223> n equals a, t, g, or c

<400> 104
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 ctgccaaagc ctgaccagga agtccgacgt taaagaaacc agctcgactg gcaacggcaa 120
 aaccaagacc aatcaagacc agaggaccca tagcacggaa gatttctcca atccccacgca 180
 gactgccaaa ggctgtatag aacaattctt cgtagcccca aatagcatca taaccgaaga 240
 tccacatgac aatgggtccg agtaaaattc ctaggaatac agaaatcaag ggaaccgaaa 300
 tttgttgtaa ttttttagac atcactcttc tcctttccca agttyccacc agccatcaag 360
 acaccaagtt cttgtttatt ggttgtttct ggtgatacaa taccttgaat cttaccatcg 420
 tggataacgg caatacggtc tgagacgttt aaaatctcat ccaattcaaa gctgacnaca 480
 aggac 485

<210> 105
 <211> 459

<212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (436)..(436)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (449)..(449)
 <223> n equals a, t, g, or c

<400> 105
 agcagaatag gcaacatcac cacgccgaca aacagcgaga agagaatgac gccagccgcc 60
 aggaacacca gctcatagcg cgccgggaag acgttaccat ccggcaagag cagcgggata 120
 gagagcacac cggccagagt gatcgcccca cgcaccccg cgaaagacgc gatcaggatt 180
 tctcgtgtgg tccacgaacc aaactccatc ggcttcttct tcaggaagcg gttgctgaac 240
 tttttcatcg tccacagcca gccgaaacgg accagcatca gcgccgcata tatcagaata 300
 atattggtaa acagcatcca gatttcgacg ttagggtcga tttcttgctg gccatcagcg 360
 gacgtcttcc agrattaccg ggcagctgca gaccttaaca gcaggaaca ccatggccgt 420
 tttaaggaca atttcnagca tcggcccang tgctgtttt 459

<210> 106
 <211> 908
 <212> DNA
 <213> Escherichia coli

<400> 106
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 aacagcgacc agtacagtgc attccatagt gcctttgtcc aggctgtatc agtaagagca 180
 ttaagtctct ctccctgtaa aataatatac agatatectt tcggttcac actctggtaa 240
 agcggtgccg tactgaaaac tttttgctta ttacacttc ggggatcatc accatatacg 300
 ggccagacac tgccggagag aaattttttc aacgggtgcaa tattgatata ccggcgtttg 360
 agatgacccg gagggcgccg tccacaagca gtcgcccttc cggtgaaacc atatacagct 420
 ccacactggg attaagcgtc atcagacgct caaacagact cgттаатgtc cgggtgttacc 480
 agacaaaaca agcatcgcaa gacgccacaa acgggtgcgt tacttaaata agccggttac 540
 aggtgaaaaa tcacgtcctg atattcaaat gttttttcag gtcataatttt agcaggacac 600
 taccagcacc taacagcagc acatctttta taacaaaact gtcaactttc cccagttgtg 660

gtaacaggct gagcgtgggtt attcctgtaa caataacgat aatatctccc agtacaccag 720
 cagcaggcct gaagaaaccg ataatcaatg ccagaaatgt gatagtttcc actatgccga 780
 ggaaatagct ccctccatga ataccaaata taatatacag gatattcagc caggtgggat 840
 atatcagggg cttgagagcc ataacttcaa aatcaaacca tttataagtc caaaaaagca 900
 taaatatt 908

<210> 107
 <211> 1057
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (88)..(88)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (1019)..(1019)
 <223> n equals a, t, g, or c

<400> 107
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 ggctaattta agtttagaaa atgaaatnaa atatcttaat gatgttactt cattagtcgc 120
 agaagactgg acttctggtg atcgtaaatg gttcattgac tggattgctc ctttcgggga 180
 taacgggtgcc ctgtacaaat atatgcgaaa aaaattccct gatgaactat tcagagccat 240
 caggggtggat cccaaaactc atgttggtaa agtatcagaa tttcacggag gtaaaattga 300
 taaacagtta gcgaataaaa tttttaaaaca atatcaccac gagttaataa ctgaagtaaa 360
 aaacaagtca gattttcaatt tttcattaac aggttaagag gtaattaaat gccacaata 420
 accgctgcac aaattaaaag cacactgcag tctgcaaagc aatccgctgc aaataaattg 480
 cactcagcag gacaaagcac gaaagatgca ttaaaaaaag cagcagagca aaccgcgaat 540
 gcggaaaaca gactcathtt acttatccct aaagattata aagggcaggg ttcaagcctt 600
 aatgaccttg tcaggacggc agatgaactg ggaattgaag tccagtatga tgaaaagaat 660
 ggcacggcaa ttactaaaca ggtattcggc acagcagaga aactcattgg cctcaccgaa 720
 cggggagtga ctatctttgc accacaatta gacaaattac tgcaaaagta tcaaaaagcg 780
 ggtaataaat taggcggcag tgctgaaaat ataggtgata acttaggaaa ggcaggcagt 840
 gtactgtcaa cgtttcaaaa ttttctgggt actgcacttt cctcaatgaa aatagacgaa 900

ctgataaaga aacaaaaatc tgggtggcaat gtcagttctt ctgaactggg caaaagcgag 960
 tattgagcta atcaaccaac tcgtgggaca cagctggcca gcctttaata ataatgttna 1020
 actcattttc tcaacaactc aataagctgg ggaagtg 1057

<210> 108
 <211> 752
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (714)..(714)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (719)..(719)
 <223> n equals a, t, g, or c

<400> 108
 taccggggccc cccctcgagg tcgacggtat cgataagctt gatatcgaat tcctgcagcc 60
 cgggggatcc actagttcta gagcgccgc caccgcggtg gagctccagc ttttgttccc 120
 tttagtgagg gttaatttcg agcttggcgt aatcatggtc atagctgttt cctgtgtgaa 180
 attgttatcc gtcacaatt ccacacaaca tacgagccgg aagcataaag tgtaaagcct 240
 ggggtgccta atgagtgagc taactcacat taattgcgtt gcgctcactg cccgctttcc 300
 agtcgggaaa cctgtcgtgc cagctgcatt aatgaatcgg ccaacgcgcg gggagaggcg 360
 gtttgcgat tgggcgctct tccgcttcc cgtcactga ctcgctgcgc tcggtcgttc 420
 ggctgcggcg agcggatatca gctcactcaa aggcggtaat acggttatcc acagaatcag 480
 gggataacgc aggaaagaac atgtgagcaa aaggccagca aaaggccagg aaccgtaaaa 540
 aggcgcggtt gctggcggtt ttccataggc tccgccccct gacgagcatc acaaaaaatcg 600
 acgctcaagt cagaggtggc gaaacccgac aggactataa agataccagg cgtttcccc 660
 tggaagctcc ctcgtgcgct ctctgtttc cgaccctgcc gctttaccgg atanctgtnc 720
 ggctttctcc cttcgggaag cgtggcgctt tc 752

<210> 109
 <211> 486
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (11)..(11)

<223> n equals a, t, g, or c

<220>

<221> misc_feature

<222> (477)..(477)

<223> n equals a, t, g, or c

<400> 109

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cttgggtaat ngacctcata tccctccgcc aaaaaaggat ctacatgcga ttttgcgaaag      60
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gatttcacaa atgtagcatg acctttcacc tgtccaagag actgcaacac catctgtcca      180
aaacaataaa taggaatcaa acaggctacc aacatcaaca agtatcccaa taaggctcgt      240
agtttagtcc ttgacatgac gccctcccaa ttgcttttct agtcctttga caatccgtcg      300
attacgatac acgcgataca gcaagagaag gatgaccgcc atcgctccta gtaataacca      360
caaccagaat tgcccacgct ctctcaccgc tcgattccgc tctgcaattg gtgccgtata      420
cggaatccgc ttccacgta ccaacagacg atgactgtta atcctatacg gtgtacnagt      480
caacca                                           486

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<210> 110

<211> 313

<212> DNA

<213> Escherichia coli

<220>

<221> misc_feature

<222> (7)..(7)

<223> n equals a, t, g, or c

<400> 110

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ttacgcnttc aaccaggtct totggtttac caacgcccac caggtaacgc ggtttgctctg      60
ccggaatttg cgggcataca tgctccagaa tgcggtgcat atctgctttc ggctcaccca      120
cagccagacc gccgacagcg taccatcaaa accgatatct accagacctt taacagaaat      180
atcacgtaaa tcttcgtaaa cgctgccctg gatgatacca aacagcgcat ttttgtttcc      240
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ttgcgtaatc cca                                           313

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<210> 111

<211> 1613

<212> DNA

<213> Escherichia coli

<220>

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<221> misc_feature
 <222> (27)..(27)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (40)..(40)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (168)..(168)
 <223> n equals a, t, g, or c

<400> 111
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 ttccaataat aaaaatcatg ctttctgtta tcaacggaaa ggtattttta ttctctgtgt 120
 ttgctttatt tgtgaaattt agtgaatttg ctttttggtg gctttatntg atgtgtgtca 180
 cattttgtgt gttatttttc tgtgaaaaga aagtccgtaa aaatgcattt agacgatctt 240
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 cataaaammc taaatttaac ttattgctg aagagtattt ccgggccgga agcatatata 420
 caggggcccc acagaagggg gaaacatggc gcatcatgaa gtcatcagtc ggtcaggaaa 480
 tgcgtttttg ctgaatatac gcgagagcgt actgttgccc ggctctatgt ctgaaatgca 540
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 gcaccttatt atacagatga gtcgtcggca tttgactaaa ttatggcatt ccggagtttc 780
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 ttgatgctcc atgcagcatt tctcagaaat cagctgatca gtctattgat tttggacagc 1140
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caacctgact tatcagtaat actgataatc cggtcggtaa acagcggaaa tattccgctg 1560
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<210> 112
<211> 930
<212> DNA
<213> Escherichia coli

<220>
<221> misc_feature
<222> (1)..(1)
<223> n equals a, t, g, or c

<220>
<221> misc_feature
<222> (26)..(26)
<223> n equals a, t, g, or c

<220>
<221> misc_feature
<222> (126)..(126)
<223> n equals a, t, g, or c

<220>
<221> misc_feature
<222> (540)..(540)
<223> n equals a, t, g, or c

<400> 112
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cagcctttca gaaagctttg gcaaccagct ttcaaaatca tgggtaccgc ttcaaacgta 180
tgcaaaccat caatatgaag cagatcaatg ctaccttggtg aaaaatgctc taacgcttgg 240
tcaaattgtac tgccaatgag agtagaaaaa cctgaatagt gctgttgatt atattctgat 300
acttgctgtt aaactttctc gccatacagc cccgcattgt catctcccc ccaggatatca 360
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gaacttccat aatgagttcc cagctcaaca atatttcttg gccgcagtgt gtcaactaac 480
cagaaagcaa aaggaatgtg ttctagccaa gcagattgtg caaggatatgt aggacaccan 540

T00260-1005550

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 atttaaatat taacaatata cttggaaata ttagttaaaa ataaatcatt atgatttctc 780
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<210> 113
 <211> 659
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (238)..(239)
 <223> n equals a, t, g, or c

<400> 113
 acgatatccc ccctctgctt ttgagaggca atctgcttta atacatgatt catcacaaca 60
 cctcttgctg cgctttgatc ttaattttat atttttgggt agggaaaagt aattgccctt 120
 gatacggctc accatttacc aacgtttcac agctatgttc cagagctaaa ttaagacctg 180
 gtagaatatc ccagcaattc acccctttga cattttcaaa gctgtcataa gcaccgggna 240
 aggggggggc aacatgttat acatggagca gccaatgata cgatattcaa agccctcttc 300
 cagttgcata agatcctgct tggtaasgga ggaagagagg ccacgaatac gagagcgatg 360
 atgtgtaatc ggcataacctg tgatatgaag atcattcaat tcaggtaaga agatgcagga 420
 ctcttgatgt ttccccctgg tgtaaagtct gataccaatg cccactctt tgagcccaga 480
 gacaaagttt tctgtgccat caattggatc tagaacaatg taagaacctt tgggattcca 540
 ctcaatatct cctaaagggg ctaattcctc tgaaattagc acatgccctg gtagatgctt 600
 tctacagagt tcgaaaacta tatcttgaac ttttagatcc agtactgcgg ccgcgatcc 659

<210> 114
 <211> 556
 <212> DNA
 <213> Escherichia coli

<400> 114
 cccggatata catcaggaga aattggagca gcaattggat gcgccattaa tgcttgggta 60
 gggatccccg catgtgggca cgcaaaggc tcagaatatg atcgaccttc accagataaa 120

```

ccaaatctga gcgaaccatt tatcccaaga cccacgtatg acgcttcact tcattcctgg 180
catggcggat actgagtaaa tcaccttgaa tcattatggt caacatcatc aattctccgg 240
acttggtgtc agatgtccgg agaataataa ctttttcttc agaaacagaw tgatcaagaa 300
tcacactcct tctttaagag gattttatcc agaaaactga ctttcttcta tcaaaatmac 360
agtatcctgt tttatcagga ataatcttta cctccggtat cattcccata atcagatatc 420
agaaaaatgt gccagtaatt ttttactgat gacttcaaac atttcacatt catcacacgt 480
cagattactc caaagttctt tcagatatgt gttctgcgcc agagtgagtc tctgaataaa 540
aaacatacct tcagac 556

```

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<210> 115
<211> 503
<212> DNA
<213> Escherichia coli

```

```

<220>
<221> misc_feature
<222> (60)..(60)
<223> n equals a, t, g, or c

```

```

<220>
<221> misc_feature
<222> (65)..(65)
<223> n equals a, t, g, or c

```

```

<220>
<221> misc_feature
<222> (90)..(90)
<223> n equals a, t, g, or c

```

```

<220>
<221> misc_feature
<222> (460)..(460)
<223> n equals a, t, g, or c

```

```

<220>
<221> misc_feature
<222> (496)..(496)
<223> n equals a, t, g, or c

```

```

<400> 115
tacctgtttg tggaatttga cccagaagtg attcatacca cgactatcaa cgcgaccn 60
gtgtncagcc acttcgtgcg ctttggcgtg cgcagcgata gtcccatcgg cggttattca 120
tcagctatcg gtatataaac cgaaagacat tgtcgattcc ggcaaccctt tatccgggtg 180

```

ataaggtgat tattaccgaa gcgcgttcga aggctttcag gccattttca ccgaacccga 240
 tgggtgagget cgetccatgc tattgcttaa tcttattaat aaagagatta agcacagtgt 300
 gaagaatacc gagttccgca aactctaaaa cgcaatccca aacagtgttt tgacattagc 360
 atccgtggtg gcagccagcc atgcggcatc ttctccacgc cagtgcgcaa tacgttgcaa 420
 aatatggggc agatgggctg gctcgttgcg ccgggatgan ggctttggcg tgagatcgcg 480
 agggagcaga tacggngcat cag 503

<210> 116
 <211> 433
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (138)..(138)
 <223> n equals a, t, g, or c

<400> 116
 tttaacatca aaattacctg cagctgaaat gattttgctg atttcattaa ttaatggatt 60
 aagattaccc tgacttccat aggctaatgc atcattccca tacacataac ttgccttatt 120
 attactctgt tgatactnaa gtgccttttt aagggaatct ggtgtgatta ccctgocgtc 180
 tttatcaaaa atctgctcta tctggtgatt agagatatca cctgactctt tttcaaacca 240
 gtttttaaat gtaataccat ttttgtggcc aatggaaaga acattacctt cagctttata 300
 catgatgagg tcattacctt ctgcctgaa ggccacatcc cggaaatcaa tatcagccaa 360
 actgagttta tcgtctttcc ccccatcatc gtcaataata tgatggccat atcctgaaag 420
 ataacgataa ata 433

<210> 117
 <211> 302
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (280)..(280)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (299)..(299)
 <223> n equals a, t, g, or c

<400> 117

gcgctctgtt cccgttctctg ttcacaccca tcgcctgtgg tgcggtatct ggcttccacg 60
 cgctgatctc ttccggtaag acgcaaaaac tgctggctaa tgaaaccgac gcgcgtttca 120
 tcggctacgg cgcaatgctg atggagtcct tcgtggcgat tatggcgctg gttgctgcgt 180
 ccatcatcga accgggtctt tacttcgga tgaacacccc gcctgctggc cttggcatca 240
 ccatgcctaa cctgcatgaa atgggggtggc gagaacgcgn cggattcatc atggcgcant 300
 ga 302

<210> 118
 <211> 656
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (628)..(628)
 <223> n equals a, t, g, or c

<400> 118
 aattaataag ccaaatacta catcacgtaa tacttgcaaa gaagtgcgtg gagtttgact 60
 aataatgggt ttgtccatta atacttacc aaataatcgg ct cattatag caacgagcct 120
 ccgattaaaa tttaaatac tcaatcattt aatagcaacg ttagcagcta cagcgatttg 180
 ataaataatt tgtgtgatat ctttaaata tgcatgggt ttgctatcaa cctgaggtag 240
 aaccaatata tgatcccccg gttgtacttt accttgccct ttaaattcta caagaccatt 300
 tgcattgaca atagcaattc gcttgctcgt agctcgtca gtaaaacctc cggcccatgc 360
 aacataatca tccaaattag catcggcatt atatactact gcttggtggca tcaacacttc 420
 accccccact tgaataagat cagtcttatt tggaataact atttgatcgc cttgttctaa 480
 ttggatawtg gcaataaac ctttatctgc aactactact ttaccaagcg gtkgaacttt 540
 acgagccttt ycaacaaact gcactactaa ctctgcttct ttagcacgta tattcgctc 600
 accatcagat cgcgcgggtg tggtaaantt catacgttcc aagcggttta gagatt 656

<210> 119
 <211> 436
 <212> DNA
 <213> Escherichia coli

<400> 119
 atatgttatc tggatccaga taaagagcgt tcttgacccg ctatatccag acaggtcagt 60
 tacaccctgt ccggaaaaac tgatcggaaat aacaacagta tattttctaa tacactggca 120
 aatgggtgccg gcggtgtggg gattcagctt ctggatagcg ctggtaatgc ggttgctgct 180

ggacagaaga aatatctggg acaggttaga ccatcaacat ctctcaatat tggattaagg 240
 gcatcttatg cactgaccaa tggacagact ccacctactc ccggacgagt tcaggcgta 300
 gttgatgtta ccttcgagta taattaggaa tgtcggggat gggctatccc cgatattatt 360
 gcaggattag tctgtgatac agatatacag cccatatgaa caactgtttg catatataaa 420
 aatgatgata atttta 436

<210> 120
 <211> 559
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (463)..(463)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (499)..(499)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (552)..(552)
 <223> n equals a, t, g, or c

<400> 120
 aataattaa tttggaggga tcagttttct gataatgttc tgttattaaa acattatccc 60
 atggggcgta gttatatcaa ttagcaggat cttatgagtt aactaacatc agttttgaat 120
 ttttaatggg ggtaatttat cttttactaa aaatatTTTA actattaata tagcatcatg 180
 gttgttacgg tttgttttaa ttctatttta taatgtgcta tatattgtat ttttgtgctt 240
 agataaatat gttttttcat tacttttagtg atgttaatat tttgcgtgta gtaaaaatca 300
 ttgttataac aaatgtcact gttgctatac tttgctgaac tgtttatcgg tcattttgat 360
 tcaatcactg gttctatatt ttttaataac cgttctgtag cgattaatat attgctctcc 420
 agaggataca ctatatgaaa tatattaaaa gtcattaatt ttnattcaat gttgtttaga 480
 gttatgttca gtgtttggna ataggatgtg tttctaaacc gtcttggggt ctataataaa 540
 ttctattctt anaggtttt 559

<210> 121
 <211> 481
 <212> DNA
 <213> Escherichia coli

<400> 121
catgtccctt cctgaatact ggggagaaga gcacgtatgg tgggacggca gggctgcttt 60
tcatggtgag gttgtcagac ctgcctgtac tctggcgatg gaagacgcct ggcagattat 120
tgatatgggg gaaaccccg g tacggattta cagaatgggt tctccggacc tgaaagaaaa 180
ttcagcctcc gggtcaggaa ttgtgaattt aacagtcagg gtgggaacct tttctctgat 240
tcccggataa gggtgacttt cgatggcgtc cggggtgaaa cgccggataa gtttaattta 300
tccggtcagg caaaaggcat taatctgcag atagctgatg tcaggggaaa tattgcccg 360
gcaggaaaag taatgcctgc aataccattg acgggtaatg aagaagcgct ggattacacc 420
ctcagaattg tgagaacgga aaaaaacttg aagccggaaa ttattttgct gtctgggatt 480
a 481

<210> 122
<211> 535
<212> DNA
<213> Escherichia coli

<400> 122
ccatatagtg acttcattga acaaaatgta aatggaatct tgctggagaa tgacccacat 60
atatggataa aagctctttc attacttggt agtgcagatc ataaacgtag cgagttggcg 120
ttcaatgcta aaaaatatgc ttgtaaaatt gtaggtgtcg agtaaaaaga tatttttatt 180
taattggtgc tattgaatgt ttaaaaatcg aactgattgg tgttttaata ttaatcatag 240
gttatgatgc aaaaatatat taggcattgc ctgcttcaat taacttgaga gtgtaagttg 300
aattgaaata tggttatatg ataaagcaat atatgttaat acatatgtca accgaaaatg 360
ccattatgtg ttttttactt tatctgtaac gacacaatat ataaaataag gctaataatc 420
aaaacgcttt ttaatttgat tgttttgaat caagtgacta agaaattctc ttgctgcaaa 480
taactccctt agtgattttt tttagagtcta ttttattctc tgggcatggt catgc 535

<210> 123
<211> 412
<212> DNA
<213> Escherichia coli

<400> 123
ccggcccat aatgatgggt ttattaaggt tagcgccgac ggtttcgatg aacgatttca 60
ggtcggtatc tttaaaatta gcggtgaaag tggcttcttc cgcccagacc ggtgaactgc 120
ataatgccgc tgccagcacc agcggcagta aacgcttttt tgttttgagg ccagttgtct 180
tcttacgcca gaccgacaac gtcatatcac gccaaaacac gatgaatgat tctcctggat 240

taaatgcggt tagcgcagcg cgatggaaat gtcgtggcgc gcacccttgc gtaaaaccgt 300
 aagttgaatg gaatccattg aaggtaactg ccgcatcaga gcaatcattg ctcgtggatc 360
 agtgaaatcc tgctgattta gcgcaaagtc gatatgcct tccttaaaac cg 412

<210> 124
 <211> 576
 <212> DNA
 <213> *Escherichia coli*

<400> 124
 tagcctgttc agcgtatatt tgggatgaga agccaaagtg gctttggtgg tgtcccagcc 60
 caggttttta ttactgctgg ttatttacct ttcatgtttt tcaataaagt tgtgactcag 120
 ttgaaatctg ctgtcaatgc taatatggga cttttttgtt atagacaagt gactcctttt 180
 gcaactttta tagcacgttt tatgctagaa acaatgggtg gcattgattgt cggataatc 240
 ctagtactag gattattgtg gtttggcttt gatgcaatac ctgcggatcc attgcaagtg 300
 atccttggtt attctcttct gatgctgttt tctttttctc ttggtattgt attttgtgtt 360
 atttgtaatt krgcgaraga ggcagataaa tttcttagct tgttaatgat gcctttgatg 420
 tttatctctt gtgttatgtt tcctcttgct actattcccc ctcaatatca gcattgggtt 480
 tttatggaat ccacttgtgc atgctgtaga actaatccga agggcatggg atatctgggt 540
 tatcgtagtc ctgatgtaag ttgggcgtat ctgtcg 576

<210> 125
 <211> 132
 <212> DNA
 <213> *Escherichia coli*

<400> 125
 ttaccaagca ggatctgatg caactggaag aaggctttga atatcgatc attggctgct 60
 ccatgtataa catgttggcc gccgtacgcg gtgcctatga cagctttgaa aatgtcaaag 120
 gggatgaattg ct 132

<210> 126
 <211> 542
 <212> DNA
 <213> *Escherichia coli*

<400> 126
 gattaggggt cactcaggat tataaaaaag cggcagaata ctataaaaaa ggtgataaaa 60
 ataattgatat tacagcacia taccgtctgg caaaacttta tgaacaaggc aacgggtgtaa 120
 aacgtgatta tcaacaagcg ataaaccttt accttaacaa tatcaacaga atggatcaca 180
 tcactgcccc cagttttgtg gctctgggtg atatctattc tctgggatts ggggtagaga 240

aaaaccacac actggctgaa aaatgggtatc aaaaagcgat agatgcagct aatacacaaac 300
 ataaccagga aataaatcat taaacgacaa cacttaatac catattgtga agatgttcag 360
 acatggcgga attccccctat tctttgttgg cgcttacaac agactatatt ccgccatatc 420
 tgtcttttatt gtgtataaac catcgatact gatgtttgat agtgctaaat aatcattggc 480
 gcaatcacaa agcctaatagc cactccagca ataattcccc ccaaccagg cagcataaat 540
 gg 542

<210> 127
 <211> 382
 <212> DNA
 <213> Escherichia coli

<400> 127
 gaaccactta gcggcagcta tcgggaatcg cctgctgaaa gacggtcaga cagtgattgt 60
 ggttaccgtg gctgatgtta tgagtgcctt gcacgccagc tatgacgatg ggcagtcagg 120
 cgaaaaattt ttgcgggaac tgtgcgaagt ggatctgctg gttcttgatg aaattggcat 180
 tcagcgcgag acgaaaaacg aagcagggtg tactgcacca gattgttgat cgccggacag 240
 cgtcgatgcg cacgtgggga trctgacaaa cctgaactat gaggccatga aaacattgct 300
 cggcgarcgg attatggatc rcatgaccat gaacggcggg cgatgggtga attttaactg 360
 ggagactggc gtccgaatgt cg 382

<210> 128
 <211> 126
 <212> DNA
 <213> Escherichia coli

<400> 128
 cgtcccgac ccggaaatgg tcagcgaacc aatcagcagg gtcacgcta gaaatcatcc 60
 ttacgcaaag ctaaggattt tttttatctg aattctagcc agatccccgc tgatttatgc 120
 tgggta 126

<210> 129
 <211> 258
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (142)..(142)
 <223> n equals a, t, g, or c

<220>

<221> misc_feature
 <222> (205)..(205)
 <223> n equals a, t, g, or c

<400> 129
 acccccagcc tagctggggg ttttctgtgc acaaaaaatc ccggcataat ggccgggatt 60
 tgcgagcttt cccactatatt cttgattcct aaacggaaca tatcagttgg gaataaaggt 120
 tgtattatca cttcatcatt anaaatgaat aatttgggag ataaagctgt tacgtcatag 180
 atattttcag cgattaatct taganttgac ctaaaaactg gaataactgc atcatctgca 240
 aagacaaaca tgtcatcg 258

<210> 130
 <211> 399
 <212> DNA
 <213> Escherichia coli

<400> 130
 aaccagcggg tcgcatcatc tcatcccact gactctccgc ttttgacaga tctgcatatc 60
 ctggggccaa cttatccagt actccgtagt ttgccgattt attcaccgc cagaacaccg 120
 cctcacctgc atcggaagc cggggggaaa actgataccc cagtagccag aacagaccga 180
 aaataatata gctgctaccc gcagtgtctg tcatgatattc aactggattc agccctgtct 240
 gctgctcaag aagtccttcc agtacaaaaa tcgaatcccg taatgtaccg ggtaccacaa 300
 tgccatggaa ccagagtagc tgatcagata cgaattatac caggtgatgc ctggtccaga 360
 accaaaatat tttctgttag atcctgagtt gatgggtctt 399

<210> 131
 <211> 745
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (297)..(297)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (323)..(323)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (330)..(330)
 <223> n equals a, t, g, or c

0996004-092001
 100250-100350

<220>
 <221> misc_feature
 <222> (335)..(335)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (715)..(715)
 <223> n equals a, t, g, or c

<400> 131
 aaataacatc aacatacatt tgactcgcgg gggaaacggt tacggagtct tcatactggc 60
 acttttttat gctgctgact actcttcgtc atcgccatca acatgcgcac gaatcagcgc 120
 cataaacggt ttgccaaagc gttccagctt gcgcacccca acgccgttaa cgctgagcat 180
 ttcgctggcg gtgatcggca tctgttcagc catctcaatc aaggttgcggt cgtaaacac 240
 cacgtacggc gggacattac tttcatcggc tatcgattta cgcagtttgc gtaattnggc 300
 gaacagtttg cgatcatagt tgnccgccgan cgatntctgc atcgctttcg gtttgagcgc 360
 cagcatacgc ggcacggcaa ttgcaaagag gattcgccgc gcagcaccgg gcgcgcggcc 420
 tctgtcagtt gtagggcaga atgctgggca atattttgcg tcaccaggcc gaggtgaatc 480
 agctggcgga tcacgctcac ccaatgttca tggcttttat cacggcccat gccatagact 540
 ttcagtttgt catgaccata gtcgcgata cgctgggttat tagcaccacg aatcacttcc 600
 accacataac ccattccaaa ccgctgattc acacgaccaa tgggtggaaag ggcaatctga 660
 gcatcggttg aaccgctgta ctgtttcggc ggatcgaggc agatatcgca gttcnccgca 720
 cggtctctga cgcccttcgc caaaa 745

<210> 132
 <211> 439
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (108)..(108)
 <223> n equals a, t, g, or c

<400> 132
 agaatggcgg cttcttgccc ccttttgccc cggctctgac tagcatggct ggagtccagt 60
 gtccaggcca cgaccatgct catcatggaa gcagcttttg tagtacantc gcagcttatt 120
 ttctggaac gaaatgtctg gcacgtggt gcataacata accccaatg ccagcagat 180
 gcacagaagg ttctagaatc gccactgat atcccataca aaatttacca aaacgtgttc 240

gtattttctcg tataaataat gtctctatgg tgacgttcta gacttcaaac ccactttttg 300
aatttgatga tgtgctccta atctcttcag gaatgtaacg cccttggttt acagctacca 360
atacactgga ggtataactta tctgcaactg gatgaactag atgtacttga gcaaacattt 420
cataagctcg acgacagtt 439

<210> 133
<211> 350
<212> DNA
<213> Escherichia coli

<220>
<221> misc_feature
<222> (97)..(97)
<223> n equals a, t, g, or c

<220>
<221> misc_feature
<222> (208)..(208)
<223> n equals a, t, g, or c

<220>
<221> misc_feature
<222> (335)..(335)
<223> n equals a, t, g, or c

<400> 133
ctggaaagcg acgttgatgg attaatgcag tcggtaaaac tgaacgctgc tcaggcaagg 60
cagcaacttc ctgatgacgc gacgctgcgc caccaantca tggaacgttt gatcatggat 120
caamtcatcc tgcagatggg gcagaaaatg ggagtgaaaa tctccgatga gcagctggat 180
caggcgattg ctaacatcgc gaaacagnac aacatgacgc tggatcagat gcgcaccgtc 240
tggcttacga tggactgaac tacaacacct atcgtaacca gatccgcaaa gagatgatta 300
tctctgaagt gcgtaacaac gaggtgcgtc gtcgnatcac catcctgccg 350

<210> 134
<211> 400
<212> DNA
<213> Escherichia coli

<220>
<221> misc_feature
<222> (256)..(256)
<223>

<220>
<221> misc_feature

0995004-03001
"00250"4003560

<222> (256)..(256)
 <223> n equals a, t, g, or c

<400> 134
 ccccaagatt gctaacaaat gcgcgttggt catgccggat gcggcgtgac cgccttatcc 60
 ggcttacgaa accgcaagaa ttcaatatat tgcaggagcg gtgtaggcct gataagcgta 120
 gcgawtcagg cagttttgcg tttgcccga accttagggg acatttagcg accccattta 180
 tttctcactt ttccgcctca tcatcgcgcg ttaattttctt tcatgaatca cgctttacaa 240
 tatccagcgc gcgcanaacg gtactggcag ggatctgaat tttcctccag cagcacaatc 300
 aaatcgacag ccagtttgac atcgtcaagg ggcattttcc cagtgcata atctctccat 360
 tgctaagcgg gttaaaacgc gctaacctgt ttcgattttt 400

<210> 135
 <211> 463
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (25)..(25)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (432)..(432)
 <223> n equals a, t, g, or c

<400> 135
 ctatccttat gaccacccaa ctacntcatt tacacccaaa ccagcgatct gaataaagaa 60
 gcgattgccc agttacgact gggcggaaaa tgcgcgtaag gatgaagtaa agtttcagtt 120
 gagcctggca tttccctgtg gcgtgggatt ttaggccga actcgggtgtt ggggtgcgtct 180
 tatacgcaaa aatcctgggtg gcaactgtcc aatagcgaag agtcttcacc gtttcgtgaa 240
 accaactacg aaccgcaatt gttcctcggg tttgccaccg attaccgttt tgcaggttgg 300
 actgcgcgat gtggagatgg ggtataacca cgactctaaa cgggcgttcc gaccgcacct 360
 cccgcagctg gaaccgcctt tatactcgcc tgatggcaga aaacggtaac tggctggtag 420
 aagtgaagcc gnggtatgtg gtgggtaata ctgacgataa ccc 463

<210> 136
 <211> 584
 <212> DNA
 <213> Escherichia coli

"00250" 4009550

<220>
 <221> misc_feature
 <222> (425)..(425)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (467)..(467)
 <223> n equals a, t, g, or c

<400> 136
 ttggtcagcc gtacctgaat gggggctgat gcccggtgg ttaatggcag gtggtctgat 60
 cgcctggttt gtcggttggc gcaaaacacg ctgatttttt catcgctcaa ggcgggccgt 120
 gtaacgtata atgcggcttt gtttaatcat catctaccac agaggaacat gtatgggtgg 180
 tatcagtatt tggcagttat tgattattgc cgctcatcgtt gtactgcttt ttggcaccaa 240
 aaagctcggc tccatcgggt cccgatcttgg tgcgtcgatc aaaggcttta aaaaagcaat 300
 gagcgatgat gaaccaaagc aggataaaac cagtcaggat gctgatttta ctgcgaaaac 360
 tatcgccgat aagcaggcgg atacgaatca ggaacaggct aaaacagaag acgcgaagcc 420
 tacgntaaag agcagggtga atccgtgttt gatatcgggt ttagcgnact gctattggtg 480
 ttcacatcgc gctcgtcgt tctgggggcg caacgactgc ctgtggcggt aaaaacggta 540
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<210> 137
 <211> 527
 <212> DNA
 <213> Escherichia coli

<220>
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 <222> (108)..(108)
 <223> n equals a, t, g, or c

<220>
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 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (510)..(510)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (513)..(513)

<223> n equals a, t, g, or c

<220>

<221> misc_feature

<222> (525)..(525)

<223> n equals a, t, g, or c

<400> 137

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ggaaagcaga cgttacaatt attaaccagg atgtttaccc agaccataaa acatggcgga      180
ttggcaaccg naaccatcgt caacaccggt gcagaagktg gtccggagtc tgaaaatgtg      240
tccagcggtc agatggtcgg agggacggct gaatccacca ccatcaacaa aaatggccgg      300
cagttatctg gtcttcgggg atggcacggg acaccctcat ttgcgctggt ggtgaccaga      360
cggtacacgg agaggcacat aacacccgac tggagggagg ttaaccagta tgtacacaac      420
ggtggcacgg caacagagac gctgataaac cgtgatggct ggcaggtgat taaggaagga      480
gggaactgcc ggcgcattac caccatcaan ccngaaaagg gaaanct                      527
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<210> 138

<211> 441

<212> DNA

<213> Escherichia coli

<220>

<221> misc_feature

<222> (440)..(440)

<223> n equals a, t, g, or c

<400> 138

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aggggcttac gaggtggtgg gggtttttga ccggattgag gaaaagcgtg atgccatgca      120
gtcgtctgatt ctgccgccac cggacgccag gcgctggcac aggcggcact gacttacgt      180
tatggtgacg aacmtcarcc cgtcaccacc gccgacattc tgacaccacg acgccgggar      240
gattacggta aggacctgtg gagtgttat cagaccattc aggagaatat gctgaaaggc      300
ggaatttccg gtcgcagtgc cagaggaaaa cgtatccata cccgtgccat tcacagcatc      360
gacaccgaca ttaagctcaa ccgcgcattg tgggtgatgg ctgaaacgct gctggagagt      420
atgcgctgat gccgtttccn t                                                  441
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<210> 139

<211> 398

T00260-1009560

<212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (164)..(164)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (210)..(210)
 <223> n equals a, t, g, or c

<400> 139
 cgagcgagat gaacttcgag ggcgggtgtga gccagtcggc ttacgagaca ctggcggcgc 60
 ttaatctgcc gaaaccgcag caagggccgg aaaccattaa tcaggttacc gagcataaga 120
 tgtcagctga gtaagcctgt atgccggata aggcgctcgc gccnattccg atgaaataag 180
 gcgcctcggg cctgaaggaa agccgtatgn atacaccgc agcccgcatc cggcaagtta 240
 caacaaataa cctttaacca tgctttttga tgtttttcag caataccccg cggcgatgcc 300
 catactggca accgtcggga gggattgatc atcggcagtt ttttgaatgt ggtgatttgg 360
 gcgttacccc atcatgctgc gccaaacaaat ggcggagt 398

<210> 140
 <211> 580
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (566)..(566)
 <223> n equals a, t, g, or c

<400> 140
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 aacaaaaggc gaagaatggc aaatcctgcg atcagcaaag tcagcgcacc gactatctgt 120
 aacatagtca ctccgtgatg aatatcatgt gtattgtgaa tgccagtga tgtggcactg 180
 aagcgtttgc acctgtccgg gtcccggta tgatgaccgs aacagagaga caatgccgaa 240
 ttatcagaag gtcacattca gtgtggcttg gccgttataa ccttcagcgc tgctgccgct 300
 gacgctgtgg gcataaccgg cctgaacgcc caggggtgata ttttcccgga cacgggcttc 360
 cagtccggcc tgcagctcca gtgacgtgcc attccgggac ggtgagaacg tcatgttact 420
 gccggctgcg gctgtacca tgctcatgtc tccccgggag ctgaagggtgc ggataacaga 480
 aggctgtacc caccggttca ccggcagttc acgcacactg tgttttgcac tgtcacgcaa 540

09156004.092004

ggtgtcacgg gatgaggtgc cttcancaaa aggtcatatt

580

<210> 141
 <211> 446
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (388)..(388)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (399)..(399)
 <223> n equals a, t, g, or c

<220>
 <221> misc_feature
 <222> (415)..(415)
 <223> n equals a, t, g, or c

<400> 141
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 gcacatccag acggccgccca ttttccagta cgacattatc agctttaccc tccacaacag 120
 agaatgctcc caggcgggtt gtgccgggtga cggttgcagc agtgctggta accagtgtc 180
 cgcccgtggt ctgggtgaca tcagacgctt taccgccggc attcacctgc agctttcctt 240
 tctggttgat ggtgggtatgc gcggcagttc ctccttcctt aatcamctgc cagccatcac 300
 ggtttatcag cgtctctggt gccgtgccaa cgttgtgtac atactgggta mctccctcca 360
 gtcgggtggt awgtgsctct ccgtgtancg tctggtcanc aacaacgcaa atganggtgt 420
 cccgtgccat ccccgaagac cagtaa 446

<210> 142
 <211> 327
 <212> DNA
 <213> Escherichia coli

<220>
 <221> misc_feature
 <222> (290)..(290)
 <223> n equals a, t, g, or c

<400> 142
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 atgagccggt ggtggttggc tctccgcaat ggcacgatga actggcaggt gccctgaata 120

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atattgccgg agttcgccac tgaccgggtca gaccggtatc agtgatgact ggccactgcc	180
ttccgtcaac aatggatacc tggttccgtc cacggacccg gacagtccgt atctgattac	240
ggtgaacccg aaactggatr gtctcggaca ggtggacagc catttgtttn ccggactgta	300
tgagcttctt ggagcgaaac cgggtca	327

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